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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/179,872	10/28/1998	PAN-JIN KIM	1317.1055/MD	6192

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EXAMINER

BROWN, RUEBEN M

ART UNIT	PAPER NUMBER
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2611

26

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/179,872

Applicant(s)

KIM ET AL.

Examiner

Reuben M. Brown

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-14 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues on page 9 that Eyer does not disclose simultaneous display of the minor channels numbers, along with their corresponding major channel number. Examiner points out that no such limitation is found in the claims.

One of ordinary skill in the art at the time the invention was made, would have been motivated to provide the viewer in Eyer with a listing of more information than the just the minor channels as explicitly disclosed at col. 9, lines 65-67 thru col. 10, lines 1-8. It is pointed out that Eyer does not actually state that the major channel number is not shown, which corresponds the minor channel numbers, ('10.1', '10.2' & '10.3'). The reference is merely silent as to whether or not the major channel is shown. Thus it would have been obvious for one of ordinary skill in the art when presented with Pitsch, to modify Eyer to display the major channel as well, since displaying the major channel number provides an unambiguous indication to the viewer as to which major or physical channel is being tuned, and its relationship to any and all sub-channels.

Art Unit: 2611

Again, examiner points out that the instant claims do not require that the major channel number and corresponding minor channel numbers be simultaneously displayed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-11, 13, 17-18 & 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer, (U.S. Pat # 5,982,411), in view of Pitsch, (U.S. Pat # 4,677,484).

Considering claims 1 & 7, the claimed method for displaying channel information on a digital TV for receiving digital multichannel TV broadcasting, comprising changing a current channel to a demanded major channel outside of an EPG environment in response to a demand to change a major channel, is met by the disclosure of Eyer, which for instance, discloses a user changing a channel from CH-8, to CH-9, to CH-10, using the Channel-Up technique, col. 4, lines 22-28 & col. 5, lines 1-30.

Art Unit: 2611

As for the additionally claimed feature of automatically displaying on a TV screen, the minor channel numbers of programs received through the currently selected major channel and a number of the major channel number Eyer, discusses that the user steps through the channels 111-113, which correspond to sub-channels of an ABC group of channels; see col. 5, lines 28-45 & col. 9, lines 14-65.

Regarding the specifics of displaying the channel numbers on the TV screen, Eyer also discloses actually displaying the list of sub-channels; see col. 9, lines 65-68 thru col. 10, lines 1-8.

However, Eyer does not explicitly state that the major channel number is also displayed. Nevertheless, Pitsch provides a general teaching of the very well-known technology of displaying on a TV screen, the channel number that a viewer selects for viewing; col. 1, lines 8-11; col. 5, lines 1-3. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Eyer with the old art of displaying the channel number of the TV channel selected by a viewer, for the desirable benefit of keeping the viewer fully informed of the status of the TV receiver.

Considering claims 2-3, Eyer teaches displaying the minor channel numbers in order of number, and after the currently selected major number, col. 10, lines 1-15.

Art Unit: 2611

Considering claims 8-9, the claimed subject matter also reads on Eyer, col. 10, lines 1-8.

Considering claim 10, the instant claim reads on displaying the TV program from the channel of the lowest minor channel number, after the instant channel is selected, which is necessarily included in Eyer.

Considering claims 11 & 13; see col. 9, lines 14-58.

Considering claims 17-18, the claimed apparatus and device for displaying channel information on a digital TV, comprising elements that correspond with subject matter mentioned above in the rejection of claim 1, are likewise treated.

Considering newly added claims 20 & 21, the claimed features of displaying non selected minor channel numbers or all of the minor channel numbers of the currently selected major channel numbers is also met by the disclosure of Eyer, col. 10, lines 1-15.

4. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer & Pitsch, in view of Etheredge, (U.S. Pat # 6,172,674).

Considering claims 4 & 6, Eyer does not teach hiding the major or minor channel numbers after a prescribed time has elapsed. Nevertheless, Etheredge provides a disclosure of

Art Unit: 2611

removing a particular pop-menu that has been activated by the user, after a certain time, if a channel selection or menu item selection has not been made, (col. 13, lines 26-50; col. 14, lines 4-40; col. 15, lines 10-25). It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Eyer with the technology taught by Etheredge, at least for the known advantage of reducing the amount of extraneous information displayed to the viewer, since after a certain amount of time it may be assumed that the viewer is no longer interested in making a channel change from the menu displayed on the TV screen.

Considering claim 5, see Eyer col. 10, lines 1-10.

5. Claims 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer & Pitsch, in view of Keenan, (U.S. Pat # 5,161,023).

Considering claim 12, the instant claimed feature reads on an endless loop operation such that once the user gets to the top of a list of programs, the next program to be highlighted (selected), would be the program at the bottom of the list, and vice versa. Keenan (col. 1, lines 51-59) discloses such a technology. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Eyer, with the known technology of 'wrap around' lists as taught by Keenan (Fig. 3A; col. 3, lines 40-52), at least for the desirable purpose of avoiding the user having to move the cursor in the other direction in order to reach the

Art Unit: 2611

opposite extreme of the instant list, which would be burdensome on the user, at least in the case of long lists of programs.

Considering claim 14, as discussed above in the analysis of claim 12, it would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Eyer with the well known 'wrap around' technology disclosed in Keenan (Fig. 3A). However, claim 14 requires the additional step that a user is automatically connected to a succeeding or preceding list of minor channels, depending on whether the user's cursor is currently selecting the highest minor channel or lowest minor channel, respectively of the currently active minor channel list.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Yoshida Teaches displaying channel information that corresponds with a selected TV channel, Fig. 3.

B) Keenan Teaches displaying channel information that corresponds with a selected TV channel, col. 3, lines 65-67.

Art Unit: 2611

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
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or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 746-6861 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")


*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington,
VA., Sixth Floor (Receptionist).*

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Reuben M. Brown whose telephone number is (703) 305-2399.
The examiner can normally be reached on M-F (8:30-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Andrew I. Faile can be reached on (703) 305-4380. The fax phone numbers for the
organization where this application or proceeding is assigned is (703) 872-9306 for regular
communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-4700.

Reuben M. Brown



VIVEK SRIVASTAVA
PRIMARY EXAMINER